THE TENNESSEE FARMER.

BY THOMAS EMMERSON, AT $1 PER ANNUM IN ADVANCE—OR $1 50 AT THE END OF THE YEAR.

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FOR THE TENNESSEE FARMER.

Culture of Blue Grass---No. 3.

Clinton College, Jan. 5, 1837.

In my second number I gave the characteristics of a Bluegrass soil, as well as the proof that ours is a bluegrass country, and the mode of preparing ground, with the manner and season of sowing; I must now begin the subject where that number left it, and give the *particulars* of management, which are *indispensable to the production of good pasture.*

PRUDENT GRAZING.

No pasture should ever be grazed in March and April. At that season of the year, grazing wounds the grass, and tramping is sure to make the ground hard and thirsty, which causes the grass to dwindle or perish for want of nourishment, during the dry summer. Then, whatever be the expense of keeping your stock off during those months, you should defray it cheerfully, for you will afterwards reap a three-fold reward in the luxuriance of your pastures. Where you are to raise turnips and potatoes, pen and feed your cattle from 1st March to the 1st of May; thus you will make good turnips and potatoes, as well as most luxuriant pastures.

The next consideration is to have *several separate pastures*, and do not divide your stock, so as to have a few in each lot to mince, and gnaw, and wound the grass all the year. Suppose you have 200 acres of pasture. Divide the whole into five lots of equal size. 100 head of cattle will be kept fat on these lots. Set apart three of the lots for the summer and two for the winter. About the first of May, turn all your stock on the two winter lots and let them be grazed down closely; then turn the stock off and let these two lots be grazed no more till winter. The lots for summer should now be grazed in speedy rotation. Put all stock on one of them, let them graze it down directly, and then turn them on a second to be served in the same way, and then graze the third lot. By this time your first lot will be finely grown up and you may commence the same round again. You are to continue to graze these three lots thus in rotation, till all of them are cropped down closely, which will not take place until 15th Decr. or 1st January. Now, in the dead of winter, when you find your summer pastures insufficient to keep your stock, you are to turn them all upon one of the winter lots, and let them remain till they have grazed it closely, when they may be admitted to the other.

The object of having several lots for the summer is, that you may shift your stock frequently. If you have but one lot you will *ruin* it, by keeping it continually bruised and wounded, and your cattle will do worse. Every pasture ought to be grazed as speedily as possible, that the stock may soon be turned out of it, and let it grow up again. By this essential mode of grazing, you may continue to *improve* your pastures for several years; and, in the mean time, they will produce more abundant crops and support more cattle. Thus managed, grass and cattle thrive together; otherwise conducted, grass and cattle both degenerate so as to be of but little value. If your lots are not grazed at all, they will soon be ruined with weeds and briars; and, if perpetually grazed, they will decline, till white clover takes them. I shall hereafter, describe fully, the manner of keeping pastures free of weeds, briars, and every foreign growth.

The advantage of having two *winter* lots, is this, your stock will knock down and expose to the frost less grass, than if they could run upon the whole ground at once. 200 acres of pasture divided into summer and winter lots, and managed as I have described, will keep fine and fat 100 steers, the year round, except in March and April. And you do not feed them even then, because you have no grass, but to make your grass continue good. Thus, your feeding season will be March and April, instead of half the year, as is now the custom in Tennessee. At that season be sure to keep every foot and tooth from your pastures.

When you have sown bluegrass, do not be discouraged, because it makes no show for a year or two. *If you can see it at all the first year*, that is as much as need be expected. It will come, if you can have patience, and astonish you with its luxuriance. But you must sow the vacant spots in February of the 2d and 3d with timothy and bluegrass, as you first sowed the whole.—Bluegrass will never be thick enough till it once seeds itself; hence, young lots ought not to be grazed in the spring season, until after the seed is ripe. If rightly managed, bluegrass will be fine the third year.

TO MAKE SPEEDY PASTURE.

Manage your old, stinted bluegrass and white clover lots, as here directed, and you will have good pastures in one year. They will be worth treble what they now are, under the present management, which so completely cripples and murders the grass that it cannot prosper. But some farmer will reply I cannot do without my lot at any time to manage as you direct. I then say, sell, or kill, or give away your stock, till you can

do justice to your pastures, and you will gain by it. If you have more stock than you can manage well, you have more than is profitable, and you would do better even to give away some, and do justice to the balance. And if you once *begin to take care* of your lots, you will soon be able, with your present labor, to keep 5 times as many cattle in good order.

But I must interrupt my remarks upon Grass, to give some notice to the Durham Cattle.

RELATIVE VALUE OF THE COMMON AND DURHAM CATTLE.

Mr. John W. Hurst, one of the most judicious Farmers in the vicinity of Lexington, made this experiment: In 1835, he bought 50 head of mountain (common) steers, from 3 to 4 years old, and pastured them one year, during which time, he fed to each one three dollars' worth of cut corn. At the end of the year, when they were from 4 to 5 years old, he sold them for $20 each. During the same period, he kept 50 head of others, 2 years old, which had a cross of the Durham blood. To these, he gave no corn, and at the end of the year he sold them for $30 per head. Making, in the aggregate, a difference of $650, including the cost of the corn. These two lots of cattle ran upon the same pastures and fared alike, except that the Durhams eat no corn. No one of them was more than half Durham blood.

Nothing could be more conclusive, than this experiment, as to the superiority of the blooded cattle over the common herd of our country.—Similar experiments have often been made in Kentucky, and with similar results. They grow more rapidly, attain maturity earlier, fatten (*at any age*) more kindly, and afford better beef.—They are more docile, and better milkers; and in symmetry of form, infinitely more beautiful. Why then do our Farmers not set about improving the breed of their cattle? With a blooded bull, and the common cows, they would at once get half-bloods, and it was this cross that Mr. Hunt found so profitable.

By persevering in a plan of judicious crossing of breeds, a new and improved race of cattle, in a few years, would take the place of the degenerate, ill-shaped, unprofitable race, with which our Farmers are now stocked.

Two years ago, Professor Yandell, of Transylvania University, at Lexington, Ky., sent to Rutherford county in this State, some fine cattle; and from the wide contrast between them and the common stock, a spirit for fine cattle is beginning to prevail in that county. Nothing but enterprize is wanted, to render the breeding of fine cattle a most lucrative branch of agriculture in our State.

During last November, Dr. Yandell again imported to his farm in Rutherford county, eleven head of the improved Short Horn Durham cattle, from the farms of Hon. Henry Clay and others. At the same time, the writer of this article also imported from Kentucky, eleven head of the Durham cattle, to my farm in Smith county. For the want of room, I must cut short the account of these cattle, and defer other particulars for a future time.

Respectfully, your obedient servant,

FRANCIS H. GORDON.

AGRICULTURAL AXIOMS.

Benjamin F. Station, Esq. in a letter to the editor of the Farmers' Register, says: "I am pleased that, in connection with others, you have succeeded in establishing some highly important truths which were formerly not known, or entirely discredited, (it is lamentable that many should still be so slow as not to embrace them.) but are now received among the more intelligent among the cultivators of the soil, as *agricultural axioms*, about which all doubt and discussion may cease; *axioms* that may be expressed in few words, and on the correctness of which any one who chooses, may immediately and safely proceed to act. A few of these are:

That deep ploughing never need be dreaded.

A small farm well conducted is a source of greater revenue, than a large one indifferently managed.

It would be a vast amount of saving to the whole community, if every private owner were required to keep his stock from committing depredations on his neighbors, instead of imposing this onerous burden upon them.

The profits of agriculture (other things being equal) are in proportion to the attention paid to manuring; that is, as is the extent of the latter, so will be that of the former.

The corn crop, with the stalk cut up from the ground entire, at a much earlier period than has usually been practiced, is worth about double what it is when gathered in the old way.

Prepared food of some kinds, and for some animals, will go nearly, if not quite, twice as far as that which is given in a raw and natural state.

The raising of tobacco need not impoverish the land, but it is only to the undue and disproportionate space that is allotted to this staple commodity that the mischief it is said to have produced, is attributable."

Imported Hay.—Great Britain is now exporting Hay to this country in considerable quantities. A vessel lately sailed from Aberdeen with 10,000 stone of Hay, and another was soon to sail from the Clyde with a still larger amount.

TRIFOLIUM INCARNATUM.

This fine variety of clover appears to be attracting much deserved attention in England, and many experiments are being made with respect to the proper mode of cultivating it. The plan pursued there by many persons of setting it on ploughed land seems to be giving way to a more certain and practicable mode of culture. A writer in the Farmer's Magazine, who signs himself "A Constant reader" gives the result of a series of experiments which he had made, that, so far as they go, would establish the fact that, to ensure success to a crop of this luxuriant and nutritious grass it is necessary it should either be sown on stubble or grass-sward. He remarks that in September, 1834, he sowed three small pieces of light land: one of which he mowed green for horses and never had the same quantity per acre of either tares or lucerne: that all kinds of stock are fond of it, and thrive astonishingly upon it: another piece was mown for stock and made the best of hay—the third piece stood for seed, and produced about twelve bushels per acre.

In September, 1835, he sowed two pieces of wheat stubble, where the *clover layer had entirely failed* before the wheat crop, and a piece of barley stubble which had also tired of clover, and succeeded in obtaining a good plant upon each.

His mode of culture is—first, to use a *large* harrow to raise a mould; then to level it with *small* harrows twice over, and finish with a heavy two-horse roller, as the land cannot be made too solid.

He *ploughed* two other pieces, having hog grass upon them, and then sowed his seed,—and in both instances the *Trifolium* entirely failed. Many similar experiments, made by his neighbors, resulted also as did his own: he therefore, concludes that, by raising a mould *without ploughing* and by sowing *trifolium* in August, or September, a good plant of the best food that can be given to stock my be obtained without risk of failure.

He recommends 10 quarts of seed per acre.

Farmer and Gardener.

Foreign Grain.—The Baltimore American states, that, within the last three or four days, about fifty thousand bushels of European wheat have been sold in that market, at $2,10 per bushel for prime white; $2.05 and $2,06 for prime red, and $1,08 for inferior red.

Freezing.—A young man in this town froze his foot, which was perfectly cured in less than 24 hours, by the application of a poultice made of yeast and Indian meal—it is equally beneficial when applied to a burn.—*Boston Silk Manual.*

PREMIUM COTTON.

There were, we understand, eighteen or nineteen loads exhibited at the warehouse of Messrs. Rees & Beall, on Saturday last, for the premiums advertised to be given on that day by those gentlemen. Samples were taken from separate bales in each load, and tied up in a piece of blue paper, and then labelled No. 1, 2, &c. In this condition the samples were handed to the following gentlemen, who were appointed judges, viz: Messrs. Amory Sibley, E. Thomas, E. Manton, and Jonathan Meigs. The Judges retired, and after being absent half an hour, returned and reported as their decision, that, No. 4 was entitled to the first premium of $75; No. 5 to the second, of $50, and No. 11 to the third, of $25. No. 4 was from the Milwood plantation of J. Edward Calhoun, Esq. in Abbeville District, So. Ca. and the eight bales were put up at auction, and sold for 18 cents to A. Sibley, Esq. No. 5 was from the plantation of John Spears, Esq. Abbeville District So. Ca. and was sold at auction to the same gentleman for 17 cents. No. 11, was from the plantation of John Whitehead, Esq. Burke county, and was sold to the same gentleman for 16½ cents. The cotton of Mr. Calhoun, was from the same parcel noticed in our paper a few days since, and as an act worthy of the man, we take pleasure in recording that his instructions to his agent in this city was, should his cotton command the highest premium, that the same should be handed over to the Trustees of our Free School.—*Augusta, Geo. Constitutionalist, of December 6.*

Calico Potatoes.—We have now in our office a basket of calico potatoes, which look and cook well, and are said to yield as well as almost any kind whatever, (excepting long reds, which are fit only for cattle and hogs.) These calicoes were presented us by Holmes Tillson, Esq., of Sidney, and were cultivated by him from seed brought from Novia Scotia. They come to maturity very quick, being ripe in July in warm seasons—are large, (which is a great object in digging, if not otherwise.) They have some resemblance to the Chenangoes, but are larger, eyes more deeply indented, and have less of the blue and purple in their color. It seems to us that this variety of potatoes will be an acquisition, and we think it would be well for those farmers who can get the seed, to plant a few hills, by way of experiment.—*Kennebec Journal.*

Tunnel.—The new tunnel of the Liverpool and Manchester Railway is one mile and one-third in length, cut out of the solid rock, at an expense of $850,000. The height of the arch is 21 feet, the span 25 feet. A train occupies six minutes in passing through.

MEMORANDA, FOR THOSE WHO WOULD IMPROVE IN HUSBANDRY.

Draining, manuring, alternating crops, and *root culture,* are the best and cheapest means of increasing the profits of a tillage farm—they form the basis of good husbandry.

1. *Draining*—The first requisite is to divest a soil of surplus moisture. Lands that are wet upon the soil or sub-soil, will not bring good grain or grass. If the evil is owing to surface water, it stagnates in summer, and becomes prejudicial to crops growing upon it, and to animals. If it proceeds from springs, it keeps the temperature of the soil too low for healthy vegetation.—In either case it prevents the land being worked early, or during wet seasons, and retards the decomposition of the vegetable matters, which should serve as the food of plants. When properly drained, wet or marshy lands are among the most productive soils, as they generally abound in vegetable matter, accumulated and preserved by water. Without draining, they are comparatively unproductive, and are often nuisances.

2. *Manures* are the true food of plants, be the speculations of theorists what they may. Every farmer may demonstrate this truth in his practice. We can no more obtain good crops from a poor soil, than we can obtain good beef from a lean pasture. Vegetable matters constitute alike the raw material for beef and for corn. The elementary matters of both are materially the same.—Every vegetable and every animal substance, or whatever has been such, however nauseous and offensive, contains food for our farm crops; and the fertility of our soil, and the profits of our husbandry, will depend in a great measure upon the economy with which we husband this vegetable food, and the judgment with which we apply it to our crops. Without good crops we cannot rear good animals; and without animals we cannot have dung to enrich our grounds. Every crop we take from a field serves more or less to exhaust the soil of fertility; and unless we return to it some equivalent in the form of manure, it will in time become a barren waste. Again, as animal and vegetable matters begin to ferment, and to dissipate their fertilizing properties, as soon as they are brought in contact with heat, moisture and air, they should be buried in the soil in the spring at farthest, in an incipient state of fermentation. And as the hoed crops, such as corn, potatoes, beans, ruta baga, &c., thrive best upon the volatile parts of manure, the long manure should be fed to them. The farmer who has a good soil, should take care to keep it good; and he who has a poor soil should strive constantly to make it better, as every advance he makes in improving it, increases his productive capital.—This preservation, or increase of fertility, cannot be well effected, without a due regard to—

3. *Alternating Crops.* Few soils will bear a repetition of the same crop for successive years, even with the aid of dung, without diminution of product, whether in tillage or grass. One reason of this is, that each kind of crop takes from the soil a specific food, which other kinds do not take in like quantity. Hence, during an intermission of four or five years there is ordinarily restored to the soil the specific food of that kind which it is capable of growing. Cultivated crops are sometimes grouped, in alternate husbandry, in three classes, viz. dry crops embracing all the small grains, and which are most exhausting; 2d, grass crops, embracing timothy, orchard grass and other perennial varieties, which exhaust less, but which run out, or sensibly diminish in product, in a few years; and 3d, green crops, comprising clover, turnips, &c., which pulverise and ameliorate the soil, and exhaust least of all. Where convenient, a crop of one of each of these classes should follow in succession, the grass continuing to occupy the ground while it continues to yield a good crop of hay. If retained too long in grass, the soil becomes too compact, and impervious to the genial influence of heat and air. It is particularly recommended, that two dry crops should not succeed each other, except wheat or rye may follow oats, when the latter is made a fallow crop upon an old grass ley. Although the deterioration under a bad system of cropping may be slow, and almost imperceptible, yet both science and experience teach us that it is inevitable, and fatal to the ultimate hopes of the husbandman. Many of the old States afford lamentable evidence of this truth.

4. *Root Culture* is one of the best gifts which modern improvement has bestowed upon husbandry. It gives the most animal food with the least labor; it is, under good management, the most certain in its returns; it gives the most manure; it best ameliorates the soil, and fits it for dry crops; and it affords an important link in the chain of alternation. It is considered the basis of good husbandry in Great Britain, Flanders, Germany and France, and has transformed the county of Norfolk from a waste to the most profitable district in England. Highly as the beet culture is prized in France, as affording a material for the profitable fabrication of sugar, it is no less valued as an alternating root crop, and as affording a material for making good beef and good mutton.—The roots that may enter extensively into our husbandry, are the potatoe (and the varieties of these that are best for table, afford the most nutriment to cattle) ruta baga, mangold wurtzel, carrot, parsnip and sugar beet.

As subsidiary to the preceding cardinal points in good farming, we give the following, which, although they may appear to many to be hackney-

ed truisms, are nevertheless so important as to be worth often repeating.

5. *Keep* none but good farm stock, whether as regards breeds or individuals. Sell the worst of your flocks. Like produces like; and the gain in breeding from the best you have, greatly counterbalances the extra price that the prime individual will bring in the market. A cow that gives eighteen quarts of milk per day in June, costs no more in her keep than one that gives but six quarts; yet the product of the first is threefold, and the profits four-fold, those of the latter. The fleece of the Saxon or Merino sheep is twice as valuable as that of the common one, though the cost of keeping them is equal. And the same corn that will make 100 lbs. of pork upon a long-legged, long-snouted, razor-backed hog, will put 150 or 200 lbs, upon the frame of a Berkshire or other improved breed.

6. Keep your farm stock well. A certain quantity of food must be given to keep them alive; all beyond this goes to increase growth, or is converted into meat, or milk, or wool; and if a little extra food is in this way profitable, much must be proportionably more so, for the more food you thus convert, the greater your return in labor, flesh and milk.

7. Cultivate no more land than you can improve, with a reasonable certainty of handsome fit, net proem bracing in the items of expenditure, the interest on its value, fences, taxes, manure and labor. The good farmer, who raises 80 bushels of corn on one acre of land, clears the price of 70 bushels, which at 50 cents the bushel, is $25, The poor farmer, who cultivates *four* acres of corn, and gets 30 bushels on an acre, bareley gets compensated for his labor & expense. We estimate the expense of raising and harvesting an acre of corn at $15, or the price of 30 bushels of the grain.

8. Buy good implements and tools, though they cost more than poor ones, and always keep them in repair for use. A good plough is drawn with half the team that a bad one is, and does the work twice as well, provided the ploughman knows how to use it. One good ploughing is better than two bad ones. Hence the farmer is soon compensated for the additional cost of the good article. The same remark holds good in regard to other implements and tools of the farm. In row culture, the cultivator will pay for itself in a season, in the economy of labor, the straw cutter will do the like in economising fodder, and the drill barrow is a subject of economy in the root culture.

9. We hardly need admonish the reader to use none but clean, good seed; for every man knows that he will reap only what he sows—the cheat controversy to the contrary notwithstanding.

10. And lastly, we should disregard our duty, did we not press upon the consideration of every farmer the importance of agricultural publications, as the cheapest and most certain means of improving in the practice and profits of his business. These bring to his notice constantly the improvements and discoveries that are going on in the business of agriculture, and they detail the practice of the best farmers of our country. He that does not keep pace with the improvements of the day, in husbandry, as in other arts, cannot long find pleasure or profit in his employment. Those who stand still and content themselves with the practice of their fathers, will soon find that the business, active world, have all gone ahead of them. But we urge this matter particularly as an efficient means of instructing and qualifying the young for the duties of mature years—of stimulating them to acquire useful knowledge, and that confidence and self-respect which should ever characterize the yeomanry of a free country. The seed must be sown, and the mind be nurtured in the youth, if we would expect a harvest of respectability and usefulness in the man.

Cultivator.

From the New England Farmer.

POTATOES USED IN BREAD.

Mr. Fessenden: I have often seen in your most valuable paper, potatoes recommended as an ingredient for bread, and in corroboration of the same, I can assure your readers and the public that while a resident for ten years in one of the West India Islands, I was in the constant habit of using wheat bread, one-third potatoes, (the same as we raise in this country) as the person, my next door neighbor, assured me in confidence, and so much was it preferred, that it was taken at the oven, as fast as it was finished in preference to that furnished at the door by the regular bakers.

There would certainly be a great saving in the use of them, as a barrel of potatoes is not one sixth that of flour in price, and they would not bear more than that proportion in weight to bread. I have no doubt that if any baker in Boston would make that kind of bread, and sell it avowedly for such, he would have a general preference. The proper mode is, to boil them, and make them into paste before they cool.

Coffee Improved.—Cut chesnut meats into pieces about the size of coffee grains, roast and grind them with the coffee in equal proportions, and the drink will altogether be better than ordinary coffee. A black powder is now sold in Paris, under the name of "Coffee Flowers imported from America," a pinch of which imparts to the coffee a very agreeable flavor. This is found to be sugar almost entirely charred. Caromel produces the same effects.

From the Cultivator.

APPLE MOLASSES—BY "TRY AND SEE."

Brother Farmers, you will listen to me a few minutes, while I tell you how to provide yourself with a first rate article, and one of prime necessity. You are probably in something of a haste, though I hope you will have your potatoes dug and safe in your cellar, for there are many things a farmer has to do to be ready for winter.—It is just about election time, also, and every farmer should manage so as to be able to drop in at the poll and give his vote for a good and true; but do not do, as many will, make the privilege of voting an excuse for spending a whole day at the tavern, imbibing "wet damnation."

If you are a married man, as I hope you are, for no other one has a consistent claim to the character of a good citizen, you know, or if you do not, your wife does, that it costs no trifling sum to provide sweetening for the family, while there is no possibility of living without it; and experience has fully shown me, that for many of the purposes of domestic cookery, apple molasses is far preferable to West India, while it is at the same time much cheaper.

I make little cider; my apples are worth more fed to my hogs than for cider; but I make a practice of selecting my best sweet apples, those that furnish the richest, heaviest liquor, and make a cheese from them, using the cider thus obtained for making apple or quince preserves, boiling down for molasses, and keeping two or three barrels for drink, or ultimate conversion into vinegar. When new from the press, and before fermentation commences, that which I intend for boiling is brought to the house, and boiled in brass, to the proper consistency; taking care not to burn it, as that gives the molasses a disagreeable flavor, and taking off all the scum that rises during the process. The quantity to be boiled, or the number of barrels of cider required to make one of molasses, will depend greatly on the kind of apples used, and the richness of the new liquor. Four, or four and a half, are generally sufficient, but when care is not used in making the selection of apples, five barrels may be necessary; but let it take more or less, enough must be used to make the molasses, when cold, as thick as the best West India. When boiled sufficiently, it should be turned into vessels to cool, and from them transferred to a new sweet barrel, put into a cool cellar, where it will keep without trouble, and be ready for use at all times.

Molasses made in this way will be pure, and possess a vinous or rather brandied flavor, which makes it far superior to the West India for mince, apple, or tart pies, though where the apples used are very sour, a small quantity of imported molasses may be advantageously used. It is also excellent for making beer in the summer, giving it a briskness and flavor which common molasses will not; in short, there are but few uses to which molasses is applied in which it will not be found equal or superior to the other. Its cheapness should also be a decided recommendation with the farmer. The cider from which I manufacture my molasses is worth at the press a dollar a barrel, and it is worth a dollar to reduce it to molasses, thus making the cost of a barrel of molasses, allowing four and a half barrels of cider to be used, $5 50. The price of common molasses will average about 50 cents a gallon, or sixteen dollars a barrel, making a saving to the farmer in the use of apple molasses of about ten dollars per barrel.

TRY AND SEE.

A very simple but efficacious remedy.—A gentleman got a spark from a locomotive into his eye, while travelling on the rail-road. He tried various means to remove it, in vain; it caused great pain. When he came on board the steamboat, the engineer took a horse hair, formed a loop by bringing the ends together, when raising the eyelid and inserting the loop between it and the eyeball, and then letting the lid fall, he drew out the hair, and with it the little cause of great pain. This is a very simple way to remove whatever may get into the eye, and should be remembered.

To make nice Cinnamon Cakes.—Take 1 lb. Sugar, ½ pint Molasses, 3 Eggs, ¼ lb. melted Butter, 1 teaspoon full Sal Eratis, and Cinnamon enough to give the proper flavor; beat all well together, then add as much Flour as will make it a soft dough; roll it then and bake it in small cakes.—*Colum. Observer.*

BEET SEED.

Mr. Whitmarsh has generously engaged to supply our Farmers next Spring with Beet Seed at cost and charges of importation from France.

Mr. Apthorp had a little seed sent to him as a present from France last Spring, from which he has raised five or six hundred Beets, weighing about five pounds on the average, and he is selling them at 25 cents each, to be transplanted next Spring for seed. It was a most beautiful sight to see Mr. Apthorp's little plat of Beets, and what a treasure it would be for a farmer to have five, ten, or twenty acres like it, growing luxuriantly on a straight line, each Beet a foot apart, and weighing five pounds apiece, the rows two and a half feet from each other, and thus growing forty tons to the acre. This would be a real treasure at the present time to feed cattle, instead of unripe corn, even without reckoning the 5,000 lbs. of sugar, and a hogshead or two of molasses, contained in the forty tons of Beets.

We understand that some people are going extensively into the culture of beets next year instead of corn, and that, too, without regard to the establishment of a sugar refinery. To such we say, we have taken out some advertisements on our last page, and in lieu of them, have reprinted Mr. Isnard's letter for their benefit; and we beg of them to look about the River Towns for Farmers who will join them in getting up a sugar refinery, and in that way falsify the old proverb, which says "you cannot have your cake and eat your cake."—*Hampshire Republican.*

BEET ROOT SUGAR.

Letter of Mr. Isnard, French Consul, to the President of the Massachusetts Society for promoting Agriculture.

Sir: As you have expressed a wish that the cultivators of this country might be generally informed of the principal observations made in France upon the culture of Sugar Beet, and also what benefits they might derive by the making of sugar, and for my own part being desirous of fulfilling the promise I made to the public, in my first communication upon the above subject, to give further information when called for, I have now the honor to transmit to you the following, which appears to me sufficient for the present, being ready at any time to enlarge on the subject if required.

The variety of Beet to which the sugar manufacturers now give the preference is the white beet (Beta alba,) imported into France from Germany, next to it is the yellow beet (Lutea Major.) The first ought to be preferred in this climate, as it stands best against frost and rotting. This variety must not be confounded with another very similar, called in French *Disette*, Sarcity Rout, (Beta Sylvestris) also white, though very often striped red and white; this last is a great deal larger, more watery, but deficient in sugar.

The choice of the best beet will not suffice; care ought to be bestowed on the cultivation, in order to enhance and to perfect its saccharine principle, and even facilitate the several processes of obtaining the sugar.

Deep, light, rather sandy, but rich soil, is the first requisite to raise an abundant crop of Beets of good quality. Beets raised on a field newly manured have proved to contain salts detrimental to sugar, and which increase the difficulty of obtaining it. Good pasture land, not marshy, broken up and planted with beet produces the most saccharine roots. The transplanting has been discontinued as more expensive, less certain, and the young plants so transplanted producing roots less perfect in shape, a matter of some consequence, owing to the subsequent mechanical operations those roots are to be submitted to; and also owing to the aptness of the plant so transplanted to rise out of the ground while growing, which causes a great loss to the sugar manufacturer, since it has been proven by analysis that the portion of the root so exposed to light and air, is far from being so rich with sugar as the part which is under the ground; hence the necessity of hoeing and earthing up the roots. Seeds ought to be laid in rows at two feet apart, that distance will allow us to perform the weeding, the hoeing, and the earthing up easily, by means of a proper hoe or plough, drawn by a horse, now generally used in France.

The gathering offers nothing particular; care ought to be taken not to hurt the roots; they should be deprived of all their small fibrous roots and also of the green part of their top to which the leaves adhere. The stowing of a large quantity of Beet deserves the greatest consideration in order to prevent their heating, for if they vegetate the saccharine principle enters into the new combinations, and sugar can no longer be obtained with the same profit.

In Germany the leaves are carefully dried and used as fodder for cattle. In France the leaves not immediately used, are left on the ground as manure.

The expenses attending the cultivation of one acre of land planted with Beet, will vary according to circumstances; every farmer is to judge for himself.

The quantity of Beeet gathered on one acre will also vary from three hundred to five hundred bushels.

A respectable farmer of this country has assured me that 600 bushels would not be considered an extraordinary crop on a rich soil and with proper management. Nothing in this remark

ought to surprise us, for admitting the roots at 2 feet apart, 11,000 roots will be gathered on an acre. The average weight of each may be 3¼ lbs. In fact, many will weigh as much as 8 lbs. each, and a few as much as 12 lbs. each. In the following calculations, I take for granted 350 bushels, as the average crop of one acre, a bushel of Beet to weigh 60 lbs.

As to the benefits that a farmer will derive by the cultivation of one acre of beet for the making of sugar, they can be stated as follows:

800 pounds good Muscovado sugar, valued at 8 cts. per lb.,	$64
50 gallons of molasses, good for distillers, at 16 cts. per gall.	8.
4 tons of pomace, a good food for cattle, $3 per ton,	12
1 ton of leaves, or their value as manure,	5
Total,	$89.

Owing to the want of skill and experience, I admit only 4 lbs. the quantity of sugar obtained, though 5 lbs. is generally obtained, and even some manufacturers obtain as much as 7 lbs. of sugar from every 100 lbs. of beet. From this amount ought to be deducted about $5 for sundry ingredients for manufacturing purposes; also the cost of one cord of wood for fuel. The several operations will be performed by the farmer at his leisure time. The expenses for tools, apparatus, &c., can be valued at about $120; but should the work be enlarged so as to work a double quantity, those expenses would by no means increase in the same ratio.

Should a company be formed to carry on conjointly the cultivation and the manufacture of sugar on a large scale, other benefits would be derived—1st. By the improving of a large tract of land. 2d. By the refining of the sugar at a slight additional expense. 3d. By the fattening of cattle. 4thly. Getting the most sugar at the least expense possible, by being enabled to secure the service of competent superintendents, and by the making use of labor-saving machines moved by steam engines; all which I am ready to demonstrate on application made to me.

In my first communication on this subject, I have stated that the pomace of beet was a better food for cattle than beets in their natural state; to this assertion objections have been made; allow me, sir, to support my position by a few observations more, inasmuch as they will impart a more correct knowledge of the benefits that can be expected by some new improvement in the process of making the sugar of beet.

By chemical analysis, 100 lbs. of beet root prove to contain 85 to 90 lbs. of water, 6 to 11 lbs. of sugar, 1 to 3 lbs. ligneous substance. Pectic acid, albumic, salts, earth, together 2 to 2½ lbs. The greater the proportion of water, the less is the proportion of sugar. The average quantity of juice obtained from 100 lbs. of beet is about 70 lbs.; the weight of the pomace left is 30 lbs. The quantity of sugar extracted from 100 lbs. of good beet, by those who are skilled in the process, is now 7 lbs.; but from 1 to 2 lbs. of it is mixed in with the molasses; then 4 lbs. of sugar are left in the 30 lbs. of pomace consequently in a less proportion than in the beet. In its natural state, the beet holds 85 per cent. of water; the juice obtained from it holds 63 lbs of water; then 22 lbs. of water remains in the 30 lbs. of pomace, consequently in a less proportion than in the beet. This is not all, in the pomace the water is *almost volidified*, as it was observed by the pectic acid which is combined with it, and contributes in a great measure to render the pomace so nutritious; if, added to this, that the pomace is easily chewed and better digested, it is not surprising that cattle relish it more than common beet, and thrive exceedingly well when fed upon it.

The following is fact: The first year I manufactured sugar in France, I offered the pomace for sale for what milk men were pleased to give; they, soon finding the benefit derived from it, offered more for it than for common beets.

Wishing to ascertain what price they were willing to pay for it, I asked one-half more than the price I paid for the common beet, (all by the weight) and yet found a sale for it. They said 100 lbs. of pomace went further than an equal weight of beet; that they were saved the trouble of washing and cutting them; that when feeding cows with pomace, they could save the dry food they were obliged to give them when feeding them with beet.

Should these observations, for which I beg your indulgence, be in any way deemed beneficial for the promotion of this new branch of agricultural industry in this country, they are, sir, at your disposal for whatever circulation you may be disposed to give them.

I have the honor to be, with the highest respect sir, your most obedient servant,

MAX. ISNARD,
French vice Consul at Boston.

To the Hon. TH. L. WINTHOP.
Boston, April 25, 1836.

BREAD.—The New York rice flour is now extensively used in Boston, in the proportion of one part to three of wheat. It is said to make the most wholesome as well as the cheapest bread that is used.

It is a common remark that those men talk most who think least; just as frogs cease their quacking when a person brings a light to the water-side.

NOTES ON FARMING.

LIME.—By the fermentation it induces, the earth is opened and divided; and by its absorbent and alkaline qualities, it unites the oily and watery parts of the soil. It seems also to possess the property of collecting the acid of the air, and of forming with it a combination of great use in vegetation. Thus robbing the soil of its oily particles, it will in time render it barren, unless supported with manures of an oily nature—Geo. Ess. p. 29. Its great use upon a sandy soil is, by mechanically binding the loose particles, and thereby preventing the liquid parts of the manure from escaping out of the reach of the radical fibres of the plants.—Ib. 30. Upon clay, the effect is different; for, by means of the gentle fermentation it induces, the unsubdued soil is opened and divided; the manures laid on regularly, come in contact with every part of it, and the fibres of the plants have full liberty to spread themselves.—Ib. 28. Although we cannot describe all the soils that lime will operate beneficially upon, we can specify some upon which it does operate well. 1. Upon all soils, being drained, which contain an abundance of ligneous or woody matter, as reclaimed swamps, and upon those containing insoluble vegetable matter, i. e. matters which will not dissolve in water, by reason of their chemical combination, quick lime will be beneficial, by rendering the inert matter soluble, and fitting it to become the food of plants. 2. Upon all soils deficient in calcareous matter, or carbonate of lime, be they even stiff clays or porous sands, mild lime, or lime that has become saturated with carbonic acid, is unquestionably beneficial. It corrects the mechanical defects of clays and sands—renders manures more beneficial, and droughts less prejudicial.—Quick lime soon becomes mild lime after it is commingled with the soil. As a general rule, carbonate of lime is beneficial upon all soils belonging to the primitive formation, and to transition formations that are deficient in this earth.—In the use of this mineral, we see the importance of knowing the constituents of soils.

Cultivator.

Economy in Feeding Cattle.—There is a remarkable difference in cattle's eating straw when fresh threshed, and when it has been threshed several days. But if fresh threshed straw is cut and mixed with hay of pretty good quality, and the whole sprinkled a little with a pretty strong solution of salt and water, and permitted to lie in a heap for several days, the mixture will improve in quality.

Much chaff and straw that is often thrown away, may with a little pains be made good fodder for cattle, by being mixed with corn stalks cut with a machine, and sprinkled with fine salt and water, if the mixture will bear wetting.—The sweetness of the stalks and the hay is imbibed by the chaff and straw, and the whole will make a compound very agreeable to cattle.—They should not, however, be confined wholly to salted food, but have fresh messes a part of the time.

When young animals are pinched for food at an early part of their growth, or fed with such as is not of a sufficiently good quality, they never thrive so well, nor make so good stock afterwards. It is said in Young's Farmers' Calender, that "in the winter the yearlings should be fed with hay and roots, either turneps, carrots, potatoes, mangel wurtzel, or ruta baga, and they should be thoroughly well fed, and kept perfectly clean by means of litter. At this age, it is matter of great consequence to keep such young cattle as well as possible; for the contrary practice will stop their growth, which cannot be recovered by the best summer food. If hay is not to be had, good summer straw must be substituted, but then the roots must be given in greater plenty and with more attention. To steers and heifers two years old, the proper food is hay, if cheap, or straw, with baits of turneps, cabbages, potatoes, &c. It is not right to keep yearling calves and two years old together, because in general the younger cattle are, the better they must be fed."

When a farmer is apprehensive that he has too much stock for his fodder, it is best not to stint them in their allowance as much in the fore part as in the latter part of winter; for cattle are more liable to be pinched with cold in December and January, than afterwards, when they become habituated to rigorous weather. Advantage may also be made of browsing more in the latter than the fore part of winter, as the buds begin to swell and the twigs have more sap in them than in the early part of the season.

If a farmer proposes to feed his cattle with potatoes or other roots, it will be better to give them but a small quantity at first, increasing it by degrees as they become accustomed to that sort of food. It will, likewise, be better to give them a little every day than a large quantity once in three or four days or a week.—*N. E. Farmer.*

To the Ladies.—It is said, if you fill flower pots about half full of quick lime, cover over this a good mould, and the flowers may thus be obtained in a very short time and at all seasons! The earth should be kept slightly moistened and pressed down whenever it rises by the swelling of the lime.

Chickens are selling at New Orleans for $2 a pair—Beef 37½ cents per pound—Butter 75 cts., and Eggs 75 cents per dozen.—*W. W. Review.*

Corn Stock Fodder.—It is observed by a writer in the Vermont Farmer, and correctly too, we think, that the stocks and shucks of an acre of good corn, well managed, will go as far in keeping neat cattle as the hay cut from the same acre of ground. What we mean by being well managed, is, that the crop be cut at the ground, and immediately stooked, as soon as the grain is glazed —that the corn be picked off as soon as it is sufficiently dried, and the forage, bound, and well stacked or housed,—and that when given out, it be cut and fed to the stock in mangers. If, when fed, it can be steamed, or wet with a weak pickle and sprinkled with a small matter of ship stuff or bran, all the better. The defects in managing this forage crop are, that either the corn is topped, and the tops left in the field in stooks, or the entire stocks are left to stand, till they are nearly spoilt by the weather,—that they are badly housed, and fed in the yard without cutting. The consequence is, that much of their nutritious matter is dissipated,—that much is often destroyed, and that of what remains eatable, the cattle are only able to consume the leaves, tops and shucks—the main stock being lost, for want of being cut, so that the cattle can masticate it. Our cows and oxen were kept last winter almost wholly upon cut corn stocks, and they were in as good condition in spring as when fed entirely on hay.

Cultivator.

The Farmers' School Book, is the title of a volume in 12 mo. of 240 pages, just published by J. Orville Taylor, publisher of the Common School Assistant, and is one of a series of small volumes which he is publishing, designed as reading books in common schools. Price 44 cents. It is a good book, calculated to instruct the boy, and to implant in his mind the seeds of knowledge and usefulness. If it is proper for boys to learn "those things which they expect to do when they are men," and of this no one will express a doubt, nothing can be more proper to be put into the hands of those who are soon to become farmers—(if the speculating mania should in time abate) than a book which teaches them the properties and laws of organic and inorganic matter —which not only instructs them in their future *business* of life, but tends to qualify them for the higher *duties* of society, which will tend to make them intelligent, and useful and good men. Such is the character of the work of which we are speaking. An effort is now making to "bend the twig" as it *should* grow, by providing for our common schools, and common school libraries, in a cheap form, a selection of books, calculated to make our sons wiser, and we trust better, than their fathers. The effort is a noble one, and those engaged in it deserve the commendation, and the co-operation, of every friend to civil liberty.—*ib.*

MANGEL WURTZEL.

Mr. Wm. K. Townsend, in a letter to the editor of the New York Farmer, has the following remarks on this valuable root:

"I am every season more and more convinced of the value of this (the Mangel Wurtzel,) crop to farmers like myself, that winter a tolerably large stock. This is my fourth season of cultivating them, and I mean in future to increase the quantity three fold. I took off my crop last fall in season to seed down the field, with rye and grass. The crop of rye was excellent, and the grass is now equal to that in the same field, sowed after a crop of early potatoes. I do not believe they exhaust land more than any other root crop; if the land is well prepared, and the seed sown at the proper time, two good hoeings are sufficient. I have this season gathered the under leaves for my hogs, and they will eat them as fast as any thing that I can give them. I do not think the crop is injured by taking them off. As my early beets did not come to perfection, we used the mangel wurtzel, taking out the smallest, when two grew together, in their stead; and if well cooked and prepared for the table, we think them as good as beets. I usually raised them to feed out after my turnips are gone in the spring; my milch cows do well on them, as well as other cattle, and I want no better feed for my breeding cows and store pigs along early in the spring, before they get a good bite of grass."

Marl.—Lime mixed with clay, comes nearest to marl of any ficticious body that we know of. Geo. Ess. p. 28. Marl is generally a combination of clay and lime, as in blue and other clay containing this carbonate; or of lime and sand, as in shell marl. The first is best fitted for a sandy, the latter for a clay soil.—*Cult.*

Soiling.—It is stated on good authority, that a grass meadow in good heart, mown and eaten green, will at a rough estimate produce treble the quantity it would if pastured, and four times as much as it would have done in dry hay.—*N. Y. Farmer.*

Preserving Seeds, &c.—Mr. Thomas Short, in the Horticultural Register, says in substance, sugar, salt, and paper have been used for the purpose of preserving seeds, but have proved insufficient; but the following method will answer perfectly well:—Let the seeds which are to be preserved be immersed in a strong solution of gum Arabic; then let them be carefully dried, and without any further preparation, they will become perfectly secured against the injurious consequences of a humid and variable atmosbpere, and not subject to mildew, and therefore enabled to retain their vitality after the most protracted voyage.

To dry Cows which you wish to fatten—Take an ounce of powdered allum; boil it in 2 quarts of milk till it turns to whey; then take a large handful of sage, and boil it in the whey till you reduce it to one quart; rub her udder a little with it, and give her the rest by way of drink; milk her clean before you give it to her; and as you see need requires repeat it. Draw a little milk from her the second or third day, lest her udder be overcharged.

Monk's Agricultural Dictionary.

We only become moral men when we accustom our affections and talents to be directed by reason.—*Jour. of Education*

Pruning Goosberries. A very suitable season for performing this operation is in winter, and it may conveniently be done whenever mild or open weather will permit. Goosberries, in order to produce good fruit, should be kept thin of branches; all the irregular and crooked ones, and old worn out bearers, should be cut out, leaving the most thrifty and the straitest shoots, which should be at nearly equal distance asunder. As the admission of air and light is essential to the perfection of the fruit, it will generally be necessary to prune off all superabundant shoots of last year's growth, and the lateral shoots on the larger branches, always cutting closely, so as to leave no stumps. A good terminal shoot should always be left to each branch, except it be unusually long, when it should be removed and a good lateral one left in its place.

The practice of clipping goosberry bushes with garden shears, which is sometimes performed, should never be resorted to, as it only renders the growth more dense, and the branches more numerous, producing an effect directly the reverse of judicious pruning.

"The good of the whole community is the good of every individual."

There is scarcely a principle so important to be inculcated, as the one we here quote. The well-being of a state, or of a community, does not so much depend upon its aggregate wealth, as upon the fair distribution of this wealth among the different classes and individuals who make up its population—not so much upon the learning and wisdom of a few, as upon the intelligence and good habits of the mass. He who seeks, therefore, to instruct the public mind in useful knowledge, to inculcate moral and industrious habits, and to promote the good of others,—fulfils one of the first duties of life, and pursues the course best adapted to promote his individual good. The pleasures of the mind, resulting from the conscious performance of acts of good will to man, far exceed those which spring from the indulgence of our animal appetites. This principle holds good, not only as regards our mental enjoyments, but the pecuniary prosperity, and general intelligence of a community, serve to promote the good of every individual, in a pecuniary, political and moral point of view,—by promoting industry and social order, and multiplying the courtesies and comforts of life.

Wealth and knowledge are but the *means* of happiness. It is the mode of *applying* them that renders them a blessing to the community, and a source of genuine happiness to the individual.—Where they are employed to administer to bad passions,—to pamper fashionable vices; or to oppress and degrade the ignorant and the weak,—they then serve to contaminate public morals, and to inflict on society the most calamitous evils.—But where, on the other hand, they are employed in furthering public improvements,—to strengthen and encourage the weak,—to instruct the ignorant,—to teach, by example as well as precept, exemplary habits:—when, in fine, they are applied, as philanthropy and christianity admonish us they should be, in furthering the happiness of a community—of a state—of a nation—of the human family—then they become truly both public and private blessings.

We seldom stop to enquire, how greatly we are dependent upon others for the enjoyments of life. Take, by way of illustrating our dependence upon others, the case of the merchant. He depends, for the sale of his goods, and the profits of his business, upon the custom of the farmer, mechanic and manufacturer, who make up most of the population of his neighborhood. If these are poor, from habits of indolence, from a want of competent knowledge to manage their affairs with profit, or from indulgence in extravagance or dissipation, his business must be limited, and his profits trifling. But transform this community into intelligent, industrious and sober men, and how soon and how greatly his prospects change. Every thriving neighbor adds to his business, and increases the means of his enjoyment. How deep an interest, then, should the merchant feel, in promoting the prosperity of all around him—in diffusing useful knowledge, and in inculcating good habits. The same dependence exists throughout all the classes of society. Each class, and each individual, therefore, best promote their own good, by promoting the good of the whole community.—*Cultivator.*

Durability in Bricks.—An impression exists in reference to the want of durability in bricks, as a building material, of the correctness of which, a little reflection will convince us there is some doubt, provided they be properly made. Blackwood, in an article on British architecture, advances the opinion, that so far from being the most perishable, they are the most durable substance, and in support of his position, adverts to the fact that the bricks of Nineveh and Babylon, in the museums, show that they were selected by the ancients as the most lasting material. Plutarch thinks them superior in durability to stone, if properly prepared, and it is admitted that the baths of Caracalla, those of Titus, and the Thermæ of Dioclesian, have withstood the effects of time and fire better than the stone of the Coliseum, or the marble of the Forum of Trajan.—*Baltimore American.*

From the Silk Culturist.

SILK INVESTIGATION.

We stated in our last number that Hon. Andrew T. Judson was appointed by the committee of Manufactures of the House of Representatives to make a report on the present state of the culture and manufacture of silk in the United States, and expressed our doubts of his attending to the subjects on account of his having resigned his seat in Congress and accepted of the office of Judge of the Circuit Court of this District. We have since had an interview with him, and are gratified to learn that he has decided on giving the subject a thorough investigation, and communicating the result to Congress at its next session.

For the purpose of collecting the facts, he has issued the following circular, a copy of which will be forwarded to silk growers and manufacturers as far as they are known, and it is hoped they will lose no time in answering the interrogatories and returning it, as it will require considerable time and labor to draw up the report after the statistics are collected. Such gentlemen as are engaged in the business and do not receive a circular, will please impute it to their not being known, and communicate all the information in their possession, directed to Mr. Judson.

As it is desirable that the committee should have all the facts in relation to the subject matter of their inquiry, all publishers of every newspaper in the United States would especially aid them, and promote the enterprise by copying the circular.

Canterbury, Con., Sept. 17, 1836.

Sir—At the last session of Congress, the Committee on Manufactures were instructed by the House of Representatives, to enquire into the expediency of promoting the growth and manufacture of Silk in the United States, and the business of the House of Representatives was such, that the Committee were unable to complete the contemplated investigations.

You will confer a favor on many of your fellow-citizens, and no doubt promote the great interest of the country, in this valuable and increasing business, by filling up the enclosed blanks, with the result of your own knowledge, or enquiries, and returning the same to me at yonr earliest leisure.

You will also please to add any other suggestions, which you may deem important.

Your obedient servant,

ANDREW T. JUDSON.

1st. What number of the Morus Multicaulis or Chinese Mulberry trees are growing in the — of one year old, and under?

2d. What number of do. 2 years?

3d. " " 3 "

4th. " " 4 do. and over?

5th. What number of Italian or White Mulberry trees of one year old and under?

6th. What number of Italian or White Mulberry trees of two years old?

7th. What number of Italian or White Mulberry trees of three years old?

8th. What number of Italian or White Mulberry trees of four years old?

9th. What number of Italian or White Mulberry trees of five years old and over?

10th. What quantity of ground is now in use for the production of silk?

11th. What quantity of ground is in preparation for the production of silk?

12th. What amount of silk has been raised in any one year previous to 1837?

13th. What amount, according to present appearances, will be an annual average crop hereafter?

14th. How many silk reels are in operation?

15th. " " Sewing silk machines?

16th. " " Silk looms?

17th. What amount of sewing silk has been manufactured in any year.

18th. What amount of wove silk goods?

19th. What number of silk manufactories are established or projected?

20th. What quantity of goods is it expected they can manufacture per month?

21st. What kind of goods?

22d. What number of individuals are turning their attention to silk growing and Manufacturing?

23d. What will be the probable amount invested in five years?

24th. In the experiments that have been made has any thing appeared uncongenial in soil or climate either to the worm or tree?

25th. If this question is answered in the affirmative, has experience enabled the silk grower to overcome the difficulties?

26th. What number of Companies have been incorporated, and what is the aggregate amount of their capital?

Cure for the Quinsy Sore Throat.—Salt, soft soap and scotch snuff, an equal quantity of each thoroughly mixed together, and applied as a plaster to the part affected, is said to be an infallible remedy for quinsy sore throat.

Cure for the Gout.—"Pray, Mr. Abernethy, what is a cure for the gout?" was the question of an indolent and luxurious citizen. Live upon a sixpence a day, and earn it was the reply.

ON PRESERVING VEGETABLES.

The preservation of vegetables for future use is effected by destroying or rendering dormant the principle of life, and by warding off, as far as practicable, the progress of chemical decomposition. When vegetables or fruits are gathered for use or preservation, the air of the atmosphere which surrounds them is continually depriving them of carbon, and forming the carbonic acid gas. The water they contain, by its softening qualities weakens the affinity of their elements; and heat produces the same effect by dilating their parts, and promoting the decomposing effect both of air and water. Hence drying in the sun or in ovens is one of the most obvious modes of preserving vegetables for use as a food, or for other purposes, but not for growth, if the drying process is carried so far as to destroy the principle of life in seeds, roots or sections of the shoots of ligneous (woody) plants. Potatoes, turnips, and other esculent roots may be preserved from autumn to the following summer, by burying them in perfectly dry soil which shall be at the same time at a temperature but a few degrees above the freezing point. Corn [grain] may be preserved many years by first drying it thoroughly in the sun, and burying in dry cool pits, and enclosing these so as effectually to exclude the atmospheric air. In a short time the air within is changed to carbonic acid gas, in which no animal will live, and in which, without the addition of oxygen or atmospheric air, no plant or seed will vegetate. The corn is thus preserved from decomposition, from insects, vermin, and from vegetation, in a far more effectual manner than it can be in a granary. In this way the Romans preserved their corn in chambers hewn out of dry rock, the Moors in the sides of hills, the Chinese at this time in deep pits of dry soil, and the aboriginal natives of Africa, in earthen vessels hermetrically sealed. The origin of these practices are all obvious imitations of what accidentally takes place in nature, from withered grassy tassocks to the hedge-hog's winter store; and hence the origin of herb, seed and root rooms and cellars, and packing plants and seeds for sending to a distance.—*Enc. of Agr.*

SWEET APPLES.

Since the farmers of this vicinity have turned their attention to apples as food for cattle, sheep and hogs, and as an article of domestic cookery, they have found that there is a deficiency of sweet apples in their orchards. When cider was much in demand, comparatively little attention was paid to the kind of apple cultivated. A few choice winter kinds, as the Russets, Baldwins and Greenings were procured, and the remainder were generally seedlings, perhaps good and prehaps bad, no matter which, if they would only make cider.

Paine Wingate, of Hallowell, who perhaps has as good an orchard as any in this vicinity, if it be not so large, and who has paid much attention to the variety of fruits, has favored us with some fine specimens of sweet apples of a variety well worth propagating. Among them were the Heath Sweeting, an apple which keeps well during the winter and into summer. Hoyt's Sweeting, an apple of very tender pulp—Smith's Sweeting, a large variety—The Franklin Sweeting, which is a large and well known variety. Mr Wingate observes that some of his trees bear every year, but that the flavor of those apples are not so good as the same variety that do not bear but every other year.

The scarcity of breadstuff and of forage, &c. has learned our farmers the value of apples as an article of food for man and beast. Very little cider is now made in this neighborhood, but the apples are given to swine and to the cattle and used on the table—and indeed we find from actual experiment that baked sweet apples and milk is far more palatable and nutritious to an Editor than "*saw dust pudding.*"—*Maine Farmer.*

Quick Work.—We were yesterday an eye witness to a despatch, which, had it not fallen under our own inspection, we should have been sceptical in believing. It was the operation, at the Fair of the American institute, of reducing wheat in the straw, to baked bread in TEN MINUTES.—The process was as follows:—Twelve bundles of straw were placed in a machine in the garden, which came out threshed in a minute and a half; the winnowing was effected in a minute; the grinding and bolting occupied a minute and a half; the dough was kneaded and the cakes formed in two minutes. The whole contents of the twelve bundles were placed in a kitchen range, and came out thoroughly baked in four minutes—making, in the whole, ten minutes. The cakes were distributed around, and they only wanted the aid of a cooler, and a few pounds of Goshen butter to have been swallowed in another minute, without the aid of mastication.—*N. Y. Gaz.*

Profits of a Law Suit.—A suit about a cider-barrel, worth 75 cents, which has been a year in court, was recently decided by the common pleas of Boston, in which the fees and expenses were upwards of $150.

Let no one count the number of his friends, till they have been bolted in the seive of his adversity; for there is much bran in prosperous friendship.

To pronounce a man happy merely because he is rich, is just as absurd as to call a man healthy because he has enough to eat.

ESTABLISHED PRINCIPLES.

Dr. Alcott, the editor of the Moral Reformer, often gives his readers some good advice, which, if attended to, would certainly be useful. By the carrying out of his *principles*, many would unquestionably be *reformed*. An article appears in the November number, under the above head. The Doctor does not mean to say, that none of his principles have been controverted. They may be applicable to some constitutions, under some circumstances; but he maintains that "to the *healthy*, all the following rules are as true in all circumstances, as that two and two make four." We shall not contradict the Doctor, but shall allow our readers to judge for themselves, without forestalling them with our opinion. Nevertheless, if the principles were not good we would not copy them.

It is sometimes said that health is important, but there are no established principles concerning it—all is "afloat." The wisest men, it is said, disagree in the plainest and very first principles; and who shall decide, when doctors differ? Now we say that there are established principles—principles as well established as those of mathematics, and we have resolved to prepare a list or catalogue of them. We have begun it below, and shall extend it hereafter, as we have time and opportunity.

DRESS.

1. Our clothing should be always loose.
2. There should be as few ligatures as possible on the body or limbs.
3. While in good health, we should always dress as coolly as possible, provided we do not feel uncomfortable.
4. All clothing should be changed occasionally, and our linen frequently.
5. The head dress should be as cool as possible.

EXERCISE.

1. Health requires that all the muscular parts of the body should be exercised.
2. Violence and excess of muscular action are injurious.
3. Sitting long in a crouched position is hurtful.

PURE AIR AND CLEANLINESS.

1. The air of our rooms should be kept pure.
2. A dry atmosphere is better than a damp one.
3. Our skins should be kept clean at all times and seasons.
4. We should neither sit nor sleep in currents of cold air.

SLEEP AND REST.

1. Night is better for sleep than day.
2. We should retire early and rise early.
3. The stomach requires its seasons of entire rest.
4. The mind should be kept always tranquil.

FOOD.

1. The best food is least exciting.
2. We should select the best food if possible.
3. We should eat slow.
4. Our food should be well masticated.
5. Hot food is less healthful than that which is only moderately warm.
6. We should seldom eat without an appetite.
7. The fewer the kinds of food at the same meal, provided it be good, the better.
8. That is not always the best food which contains the most nutriment.
9. We require more food when we have the most proper amount of bodily & mental exercise.
10. Heavy suppers, especially when we are fatigued, should be avoided.

DRINK.

1. We should use the best drink, when we can get it.
2. The best drink is pure water.
3. Very hot and very cold drinks should be avoided.
4. We should never drink to cool ourselves.
5. We should never drink merely to wash down our food.

MISCELLANEOUS DIRECTIONS.

1. The earlier we form good bodily habits the better.
2. Neither the reddest nor palest faces indicate the best health.
3. Colds lay a foundation for other diseases, and might, if more pains were taken, be avoided.
4. Prevention is better than cure.
5. Medicine, unless indispensably necessary, is always injurious.
6. If you consult a physician at all, do it seasonably.

Antidote to Poisons.—The fact that Ground Mustard proves a sure remedy in all cases where vegetable, and in nearly all where mineral poisons are taken into the stomach either by mistake or design, if given immediately after such deleterious substances have been received, is a circumstance that should be universally known.

We are led to make these remarks, in consequence of two cases of accidental poisoning having come under our observation within the last four weeks, one from Oxalic Acid, the other from Nitrate of Potash; in both cases they were taken, supposing them to be Sulphate of Magnesia, or "Salts." The former did its deadly office, by reason of its victim's living at a distance from medical aid, and being ignorant of the fact that ground mustard taken in a dose of a table spoonful, mixed in water, is an instantaneous and powerful emetic; the other one availed himself of this remedy upon the spur of the moment, and no ill effects from the poison have since arisen.—*Bunker Hill Aurora.*

POETRY.

HUSBANDRY HONORABLE.

BY T. G. FESSENDEN, EDITOR NEW ENGLAND FARMER.

"Hate not laborious work, neither husbandry, which the most High hath ordained."—*Ecclesiasticus Apoc.*

Although some men, with pride elate,
Can't condescend to cultivate
The life supporting soil,
The Highest husbandry ordained,
Nor can the proudest be sustained
Without the Tiller's toil.

If Adam, in his sinless state,
Was well employed to cultivate
The ground which gave him birth,
Truly his fall'n, degenerate race,
Should not esteem it a disgrace
To till the fruitful earth.

Yet many a hale and brawny lout
Won't stoop to set himself about
So noble an employment!
In doing mischief—doing nought,
And doing nothing which he ought,
Is placed his whole enjoyment.

Some dolts, as stupid as a stump,
Have had the happiness to thump
Their pates against a College;
Can construe, possibly, *quid ages*,
And therefore think themselves great sages,
Quite prodigies of knowledge.

Others, perhaps still greater bores,
Have learned the odds in merchants' stores
'Twixt muslin and molasses;
But still for manners, means and mind,
Rank with those brutes he used to find,
Who sought his father's asses.

Yet, being *gentleman by trade*,
They will not touch an axe or spade;
But useful labor shunning,
They lounge about in lazy bands,
Throng tippling shops and tavern stands,
Like rattle snakes a sunning.

And some the learned professions crowd,
Whose shallow pates are not allowed
To grapple two ideas;
Their feeble wits for years they task,
Ere pride will suffer them to ask
What nature's fixed decree is.

All these, a poor mistaken race,
Think husbandry a great disgrace,
Though Washington thought not:
And hands which empire's rod could wield
Have been employed to till the field,
And blest their happy lot.

Now, these our lays are not designed
To undervalue men of mind,
Nor fruits of intellect;
The learn'd professions we would fill
With men of science, sense and skill,
Most worthy high respect.

Still these professions 'tis allowed
Are sadly cumbered with a crowd,
A nice, but greedy train,
Obliged to tax their brains with double
A lab'ring farmer's toil and trouble,
A livelihood to gain.

Merchants are useful in their places,
But if society embraces
Too many of their caste,
As sure as man's to trouble born,
Straight through the small end of the horn,
Some must be squeezed at last.

Reader, I don't pretend to say
But what *your* eminency may
Be blest with parts uncommon;
A better head and heart, perhaps,
Than commonly since Adam's lapse
Are owned by man or woman.

It does not follow thence, however,
Your hands so delicate must never
Perform laborious work.
That you may loiter life away,
And vegetate from day to day,
As lazy as a Turk.

You are, perhaps, by mother wit,
As well as education, fit
Some famous part to act;
But it is possible there may
Be other great men in your way
Equal to you, in fact.

And if you've reason to suspect
The higher toils of intellect,
Are not for you decreed,
Your hands in useful labor plied,
May with God's blessing still provide
For every real need.

Then swing the axe or ply the spade,
Or work at that mechanic trade,
Which suits your genius best;
Be travelling tinker, rather than
A mischievous or idle man,
A nuisance or a pest.

THE HONEST MAN.

All are not just, because they do no wrong,
But he who *will not* wrong me *when he may*,
He is the TRULY JUST. I praise not them
Who in their petty dealings *pilfer* not:
But him whose conscience spurns a secret fraud,
Where he might plunder and defy surprise.
His be the praise, who, looking down with scorn
On the false judgment of the partial herd,
Consults his own dear heart, and boldly dares
To be (not *merely to be thought*) an honest man.

DUELLING.—A sensible writer on the subject of duelling has said, that this practice ought to be encouraged, on the ground that in most duels the world may get rid of one fool and perhaps of two!

Men fight to please others, not themselves.—What duelist ever toed the mark without cursing the inventor of pistols.

Philosophy is satisfied if it rectify a few gross vices, but the aim of Christianity is to purify the whole heart.

KENTUCKY STOCK.

From the Lexington Observer & Reporter.

Cumberland Ford, Knox co., Ky.
January 8, 1837.

MESSRS. FINNELL & WICKLIFFE:

Gentlemen—Having for the last several years given you a list of Stock passing this place for market, and believing it may interest some of your patrons to see the quantity of stock sent from, and the probable amount of wealth brought through this one mountainous channel, I again submit to you my account for the past year.

		Probable value in market.	
Horses,	5,391		
Mules,	2,338		$740,610
Hogs,	68,225	" "	1,151,296
Beef cattle,	2,689	" "	121,005
Sheep,	1,500	" "	6,000
		Total value,	$2,018,911

Kentucky may boast of her enterprising sons, of her soil, and of her fine stock of every kind—and I hope in a few years more, if she be weighed in the balance of internal improvement, she will not be found wanting. Very respectfully,

JAS. RENFRO.

POPULATION OF THE GLOBE.

The whole human race, if collected together in one spot, would not occupy a space equal to that in which London stands. For, supposing the population of the globe to be equal to 1,000,000,000 souls, and the average space occupied by each individual to be one square foot, the whole of the human family collected together in one column would cover a square of $1,626 feet, or of about six miles. They would all easily be contained within the circumference of London.

Steam Power Superceded.—Mr. U. Emmons, of New Jersey, has invented a locomotive for rail roads, which he says will go at a great rate by a *spring power* without the use of steam, and he is to make the experiment in the village of Freehold, on the 7th, 8th, 9th and 10th of Dec. A number of gentlemen have examined his machine, and express the conviction that it will be successful. We *hope* so.—*Cou. & Enq.*

New Vessels.—From the Shipping List it appears that 957 vessels were built last year in the United States, and that the tonnage was 118,330, viz: 98 ships; 94 brigs; 497 schooners; 180 sloops; 88 steamboats—Total 957.

Specie.—The importation of gold and silver coin and bullion during the year 1836, was $12,166,272, and the exports $4,435,851, leaving a balance in the country of $7,730,557.

ADDITIONAL AGENT.

WILLIAM CLARK, Ida Post Office, W. Ten.

Editorial Notice.

The long and severe indisposition of the Editor must be his apology for the absence of Editorial matter, and for any other imperfections which may be found in this number. The new type ordered are on the way, and it is hoped will arrive in time for the next number.—If the restoration of his health, therefore, shall permit the resumption of his Editorial labors, he hopes to be able to present the March number to the public, not only improved in its typographical appearance, but in its intrinsic value.

MONTGOMERY NURSERY.

(Near Clarksville, Ten.)

THE collection of FRUIT TREES—ORNAMENTAL TREES—SHRUBS and FLOWERS, has been much increased the present year. The following are now ready for sale: Apple trees, 93 varieties: Pears, 63 varieties—including many fine new Flemish, French and English kinds: Plums, 30: Peaches, 47: Nectarines, 4: Apricots, 2: Cherries, 14: Grapes, 18: Almonds, 3: Quinces, 3: Mulberries, 3, including the Morus Multicaulis or new Chinese: Strawberries, 23: Gooseberries, 44, red, white and yellow: Currants, 10: Raspberries, 6: Medlars, Figs, Filberts and English Walnuts.

Roses, 52 varieties: Tulips, 109: Chinese Chrysanthemums, 23: Pine Trees, 5: Abele, or Silver-leaf Poplar, of rapid growth and very ornamental, having the appearance at a distance of a tree covered with white flowers and green leaves: Purple Fringe or Smoke tree, singular and pretty: White Fringe, long pendant flowers, appearance of cut paper: French Tamarix, much admired: Snow Berry from the Rocky Mountains.

Double Dahlia or Georgiana, 79 varieties, comprising almost every color, grows from 2 to 9 feet high, blooms from July until frost, flowers from 2 to 20 inches in circumference, of unrivalled beauty. Chinese Ailanthus or Tree of Heaven, leaves four feet long: Buffalo Berry or silver-leaved Shepardia and English lime, with a number of others.

Orders from a distance will be promptly attended to, and Trees and Plants so packed as to insure their living, if properly attended to after they are received. Priced catalogues, with directions for planting, &c. will be furnished, on application by mail or otherwise.

CHAS. MINOR.

Sept. 15, 1836.

☞ **Gama Grass Roots** can be supplied in any quantity on good terms. C. M.

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